THE WORK OF THE HAND

by Pat Ludick

Recognizing Maria and Mario Montessori's reverence for the hand, Pat Ludick takes the reader into the wonder of the human body, mind, and spirit and across the planes of education, into the making of a whole personality and grounded intelligence that is ready for the adult world. Putting the hand front and center, she lyrically evolves an overview that builds a fascination with the capacity of the hand to represent what Frank Wilson calls a "central position in human life." Looking at the elementary years, Pat characterizes the history of human products as keys to the history of human creativity, inventions, and constructiveness. Throughout history, whenever humans used their hands to make crafts and learn they also created choices and artistic expressions that awaken sensitivity to the aesthetics of the world. The adolescent's orientation to the land and to work in nature also challenges the hand to manual work as well as personal artistic expression. The work of the hand at the Children's House completes the presentation of the three planes of education as Ms. Ludick alludes to the role of the hand for practical life, sensorial, math, and language.

What a wonderfully diverse group of practitioners, parents, artisans, and teachers, all here on behalf of the children and adolescents we have chosen to serve. I feel honored to be able to share some time and thoughts with you today.

Since I was asked to present this topic, the work of the hand, I admit to having become a bit obsessed with everything and anything that has to do with this marvelous appendage. Jokingly, I think I

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may have become a silent member of some secret league of hand-watchers. You know how such a concentration of focus can drive one forward. You see it all the time when your children embrace a work of interest that catches them and pulls them into deep concentration. That is right where I am!

Books have been written about the hand. Scientific and neurological theories about the hand have been presented in a multitude of settings. Prayers have been composed; psalms have been sung and chanted over the ages. Art and sculpture has inspired and instructed and called the viewer into contemplation on the hand. Music and poetry has invited attention to its power; and entrepreneurships that require the skill of the hand have flourished. Make no doubt about it, the human hand with all of its power and mystery has gained a place of genuine recognition within our world of diverse cultures.

On a practical and comical level, I began to see the importance of the hand in all the contexts of work that became part of my day. There was the dentist, the eye doctor, the lady at the check-out counter, my attempts to open a peanut butter jar, the stylist who gave me a little haircut, my husband's go at carpentry, the laundry folders in our adolescent program, the young cooks in our school kitchen, the teenage essayists and detailed mathematicians, the priest at Mass with the blessings I need, they all have been under my lens of awareness. Now I get to get it out of my system! However, in turn I will ask that you take on my obsession today, for it will be your task to examine and to respond to this important tenet of Montessori education throughout the hours ahead.

With this spirit, I am proposing that this morning we concentrate on setting the stage for what I hope will be wonderful conversations as the day progresses. You will be invited to speak candidly with each other in the workshops that follow. I plan to do my best to open ideas and to prick away at awareness for that important dialogue. You all have experience and training and insights and worries that need to be shared. Perhaps a few of the ideas I bring to the forefront will perk some truths within you and add light to someone else's experience. Yes, collective experience and collective intelligence must be at work today.

Here is the overview that will lead us forward. There will be four subtopics related to our big focus:

- The Wonder of Being Human
- The Hand: Action and Learning
- The Big Picture: the Continuum of Formation
- The Role of the Adult: Protector and Guide

First, I would love to present to you a brief reflection as a centering point. As we consider the whole process of human becoming, of formation, we must commence at the beginning and stand in total awe of the human being, of life, and of its dignity and purpose. This is the keen awareness that guides our study today at Mountain Laurel. Every time we focus upon a single tenet of Montessori philosophy or principle or pedagogical data, we have to revisit not only the ongoing picture of human formation but the image that stopped us in our tracks when we took our training or even explored serving in a Montessori environment. A prepared environment is a response to this great gift on every level of engagement.

Next we will consider the role of the hand in action and learning. We will examine the attributes and the nature of the hand itself. Dr. Montessori, her son, Mario, and her grandson, Mario Jr., all make direct reference to the influence of the hand on learning and upon intellectual and social emotional development. I will also reference the admirable works of Frank R. Wilson, a notable neurologist, who has written about the connections of the hand and its evolution in connection with the brain.

The late Dr. John Napier, a physician who published extensive research on the anatomy, structure, and function of the hand, is yet another resource that I will highlight for you as we move along today. I have tried to do a lot of reading as I prepared but admit to perhaps only scratching the surface in terms of depth and breadth. Pulling all this together has been a challenge for me but I hope it can be helpful.

Next we will consider the big picture, which is the continuum of formation. I invite you to stretch back and forth as we examine these four dynamic stages of growth, referred to as the *constructive rhythm of life*. It is far from linear, each stage having its own purpose in terms of work and the building of the holistic human adult, the centered personality. Within each six-year period we attend to the emotional, the physical, the intellectual, the social, and the spiritual components of the formative process. The work of the hand prevails throughout each cycle and is critical in the formation process. The tasks change but the hand remains as a powerful instrument of action and contact.

Finally, we will reflect upon our work as guardians of the prepared environment wherein children learn and develop through their interactions with the world of incredible materials and experiences and relationships that we prepare for them. We will address the role of the adult as protector and guide. Our selfless hands learn to serve life. We must contemplate that privilege in a responsible and humble manner. How can we prepare ourselves to engage in this great work? What are our duties as we carry out our lessons earnestly? How do we guide, comfort, protect, challenge, and invite our children forward. Where is our delight and sense of energy?

THE WONDER OF BEING HUMAN

It is so important that we come back to a sense of wonder about the creation of man, the human being, the gift of life with all of its powers. Mario Montessori, Jr. speaks of his grandmother's pioneering efforts and her personality. He says that one of her striking qualities was her deep respect for creation. She never ceased to marvel at its manifestations, whether they were found in the complexity of the human or in the mysteries of natural world. We must imitate that sense of awe and gratitude as well. How important it becomes to be spontaneously surprised by the goodness and wonder of living. Dr. Montessori instructed us to return to the child over and over in order to gain a sense of equilibrium and understanding, no matter where we were in our process of serving the developing human. She believed that nature in such a pure form would provide constant inspiration wherever we are in our work as directresses or teachers or guides. It is all there! Education is after all seen as a response to

all that is happening naturally within the child and growing adolescent, not something we impose upon the young of our species. Dr. Montessori instructed us to observe the child/adolescent as body, mind, and spirit and hoped that we would be awed by the power of its ability toward self-construction. Remember she coached us to understand that we were invited to prepare an environment wherein this wonder of creation could follow its human tendencies, those innate drives, those grand energies of the spirit, leading the human toward wholeness and optimal development. It was through exploration, orientation, activity, order, manipulation, work, imagination, exactness, and belonging that the child/adolescent would become a new human within the society of his time and place, a human being with a yearning, a deep energy, and a great spirit. She envisioned a person with a well-developed, centered personality, a heightened intelligence, and mission of goodness and peace. This was her thesis; in fact it was her life work! She instructed us to gaze at the child with new eyes and with a keen imagination that looks to his future. She beckoned us to follow the laws of natural development as we served his needs.

Now what does this preface have to do with the work of the human hand? At the moment of birth forward, we marvel at the sense of touch, the little one's exploration and orientation to his new world, his mother and his father, his home, his culture. The baby reaches out in expectation and explores, investigates, manipulates, and forms personality in unconscious and conscious ways through those precious hands as instruments of self-construction. Movement is perfected. Those legs develop. Walking begins and then, Montessori says, the hands are as active as can be. Those legs take him everywhere as he strives instinctively to become a man of his culture and time. The hand and the eye work in coordination and the sensitive periods invite focus upon touch and refinement of the senses as well as movement and language and social development. The development of the personality begins earnestly as the child is formed by his interaction with the environment. It is the work of the hands that leads the child forward. The human tendencies are in command as movement, exploration, orientation, activity, manipulation are realized. The work of the hands drives the process of becoming in amazing and observable ways.

From Education for a New World (49) we read,

We cannot separate what nature has put together. By considering physical life on one side and mental life on the other we break the cycle of relation, and the actions of man remain generally separated from the brain. Movement should be the servant of the whole life, and of the spiritual economy of the world.

It is fundamental that the actions of man should be connected at the center, the brain, and put in their place. Mind and movement are two parts of a single cycle and movement is the superior expression.

In the early months of life, the work of the hands is fascinating to observe. The child is grasping and studying his hands by four months, and then selecting objects to be grasped by nine months. There is repetition, exploration, and discovery, and then once those legs get walking, watch out! We then see the first activities of the hand directed toward work. By eighteen months he is lifting, climbing, and pushing his opportunities forward. He is able to do exercises with his hand leading to independence and purposeful

movement. The little one is cleaning, dusting, and soon laying a table. The adventures continue with trails of strength on the road toward independence and by the urging of nature to take an active role in life, in all that is going on around him. Amazingly, he is also building strength of character.

During middle childhood, there seems to be an appropriate time when the elementary student awakens in beautiful ways to discover the miracle of the hand.... They manipulate materials and learn and grow and integrate facts and discoveries into their beings.

Dr. Montessori also addresses the importance of the hand in a very informative chapter from *The Absorbent Mind* titled "The Intelligence and the Hand." She explains that the hands are connected with mental life. She states that the study of a child's psychological development must be closely bound up with the study of his hand's activities, which are stimulated by his mind. The two are intertwined. She even goes on to say that:

The child's intelligence can develop to a certain level without the help of the hand, but if it develops with his hand, then the level it reaches is higher, and the child's character is stronger.... The child's character remains rudimentary unless he finds opportunities for applying his powers of movement in his surroundings. If a child has been unable to use his hands, his character remains at a very low stage in its formation; he is incapable of obedience, has no initiative and seems lazy and sad. But those children who have been able to work with their hands make headway in their development and reach strength of character which is conspicuous.... The hand is related to the personality. (151)

I invite you to remain in that state of wonder and awe, seeing the richness and potential of every human life and to open your awareness as we now transition to a direct celebration of the hand. Please stay in that place of awe and delight.

THE HAND: ACTION AND LEARNING

The hand has come to be known as the most fascinating of human appendages. It is true that the acute sensitivity, precision, and expressiveness of the human hand distinguish humans from animals. Its basic structure has remained unchanged for over two hundred million years. Anatomy is not my stronghold, but I have learned that the human hand consists of twenty-seven bones and thirty-five powerful muscles that move the hand. The hand contains at least four types of nerve endings that make the fingers and thumbs highly sensitive. It plays a critical role in both receptive and executive activity. It is recognized as an instrument of the physical, mental, spiritual, and emotional aspects of the personality, all converging upon this characteristic organ which, by serving all, contributes to their integration and harmonious growth. If we look at the hand, we see the quiet center of the palm, with four delicate fingers raying out from it, an opposable thumb that enables one to grasp things in the hand. Indeed the movement of the thumb underlies all the skilled procedures of which the hand is capable. I love the following reflection of Susan Greenfield, in her work, The Human Brain: A Guided Tour (46).

> The powerful heel of the palm can be seen as the will aspect of the hand, the center palm as the feeling aspect, and the fingers as the thinking part. The hand, the arm and the

shoulder are a trinity in themselves. The hand is related to the nervous system, connected with thinking; the arm is the balancer in the center, related to feeling life, while the shoulder carries the will. The eye in the meantime directs the fine and large movements of the hand, arm, and shoulder. The eye carries thinking, feeling, and willing; it registers vitality.

The late Albert Joosten, a first generation Montessorian, writes in a rather elegant way that,

The hand that moves, fits, pairs, superimposes, traces, grips, touches, strokes, follows, and guides and helps to fix the attention and satisfies the always hungering motor urge. But it also develops and prepares itself for more specialized activities while doing so. It helps, and therefore is helped, it serves, and therefore develops. It is always humble and obedient but an equally worthy and indispensable partner of the intelligence and will. The will and the intelligence depend on it for the assertion of their supremacy. They would not build anything and be deprived of the controlling, confirming, or disproving function of a manual execution. Even the senses would be in danger of betraying the intelligence which draws on the information for its characteristic human privilege of abstraction. Here we meet a new function and a new dignity of the hand, the handmaid of the intelligence. (51)

And then in Mario Montessori's little treatise on *The Human Tendencies and Montessori Education* (30), he writes,

Hands are not lifeless instruments. Like the rest of man they have to learn. So, the part of me, Man, which is mind, must first control and develop them to make them do what I want. Experience and activity are necessary in order to make intelligence expand and acquire greater understanding.

Frank Wilson, the neurologist I spoke of earlier and author of a text called simply, *The Hand* (195), states this about the wonder of this marvelous gift of life—the hand:

Learning is brain and hand and eye and ear and skin and heart; it is self alone and self in community, it is general and specific, large and small, the interaction of brain and hand, the growth of their collaborative relationships and all manner of other selves ... musical, building, playing,

hiking, cooking, juggling, riding, artistic selves.... This not only signifies but proves that what we call learning is a mystery of human life.

The desire to learn, he maintains, is reshaped continuously as brain and hand vitalize one another, and the capacity to learn grows continuously as we fashion our own personal laboratory for making things. Dr. Wilson believes that the hand is as much at the core of human life as the brain itself. Clearly, the hand is involved in human learning. He boldly states, as did Dr. Montessori, that "The educational system must accommodate the fact that the hand is not merely a metaphor or an icon for humanness, but often a real-life focal point, the lever or launching pad ... of a successful and genuinely fulfilling life" (295).

And so the hand becomes an instrument of action and contact. The brain does not live inside the head, says Dr. Wilson, even though it is its formal habitat. "The brain is hand and the hand is brain and their interdependence includes everything. We come to celebrate the hand and its central position in human life" (14).

During middle childhood, there seems to be an appropriate time when the elementary student awakens in beautiful ways to discover the miracle of the hand. The second-plane child is all about action and invention for it is the time when the imagination attaches itself to mature goals and even to the hand of a mentor. During this period of development, the study of contributions and the selflessness of others, such as explorers, inventors, scientists, writers, artists,

the people who used their hands to bring about good in the world, are invited into the child's life in direct ways. The children examine who invented writing and the instruments we write with, and how stories and numbers came into being. They learn how maps were drawn, ships were made, and how people followed

The unfolding of a centered life is built through hand and brain connections. We must be able to see our work as having a bearing on what has been, as well as what awaits at the next stage of growth. As advocates for the natural self-construction process, we must be mindful of the path toward wholeness and see our hands and their hands as part of that process.

the work of the hand and the brain and the imagination here, there, and everywhere. They draw timelines and illustrate stories and write research reports. They manipulate materials and learn and grow and integrate facts and discoveries into their beings. Beautiful and clear and engaging stories are presented as a first-period lesson. The beauty of the hand is held in awe through work and play as they ponder the elegant hands of the sculptor, the hands of artists, musicians, as well as the powerfully strong and rugged hands of the laborer. This captivates the imagination of the second-plane child. They are hungry for impressions of what has been and are just beginning to imagine what can possibly be.

They come to some awareness of what was stated by Dr. Montessori:

The hand has followed the intelligence, spirit, and emotions and has left traces of all behind...products of his wanderings. All changes in man's environment have been made by the hand of man. It is because the hands have accompanied the intelligence that civilization has been built, so it may well be said that the hand is the organ of that immense treasure given to man. (*Education for a New World* 52)

Keeping in mind the format of the three-period lesson, secondperiod work with the hands is instrumental in enabling the young student of life with the impressions and fire that will draw interest and choice into a healthy relationship. Interest and choice come about through the work of the hands and the intellect and the social collaboration that many hands may invite. "Children's characters change by means of calm, constructive activity that develops their intelligence" (Education and Peace 94). "The child must always be given work to do with his hands as he works with his mind, for the child's personality has a functional unity (Education and Peace 95). Yes, motor activity and mental effort and social development are ever spoken in the same breath by Dr. Montessori. Then arrives the important third-period lesson of presentation, complete with works of the hand that teach and instruct others and celebrate learning in a social manner. Mario Montessori reminds us of Dr. Montessori's directive that states, "For the development and growth of his intelligence, the child must be allowed to engage in spontaneous activity, to work with his hands and be provided with a control of error" (30).

Through the practice of handwork, children of all ages perfect movements of their hands, experience the joy of creating and are stimulated intellectually by the knowledge of important crafts and their use in many parts of the world. They are awakened to the appreciation of artistic values: color, line, pattern, texture and design. They are exposed to many artistic media and are taught the use and care of materials. They become keen observers of the world around them, and with practice become able to have their hands obey their will. Through this work they derive a sense of their own value and achieve an inner glow of satisfaction. The use of tools, learning to use them in effective and efficient ways helps his hand to experience a sense of refinement. Showing children the serious possibilities that accompany the use of tools leads to skilled efforts and well-trained hands.

In *Education for a New World* Dr. Montessori adds even more to this understanding, addressing the timeline of civilization and the work of the hand.

It is characteristic of man to think and to act with his hands, and from the earliest time he has left traces on his work, rough or fine according to the type of civilization. As mentioned earlier, the hand has followed the intelligence, spirit, and emotions, and has left traces of all behind man in his wanderings. Apart from the psychological point of view, all changes in man's environment have been made by the hand of man. It is because the hands have accompanied the intelligence that civilization has been built, so it may well be said that the hand is the organ of that immense treasure given to man. (52)

And then there is the call to work with the hands that occurs during adolescence. In Montessori's educational syllabus for the adolescent, a great deal of emphasis is placed upon personal expression in keeping with the development of the personality at this tenuous stage of growth that invites a discovery of the self on a new level. Self-expression through the arts: music, public speaking, sketching, ornamental design, reproductions of nature, and learning of all kinds of handwork and modern techniques is recognized as incredibly important for the social newborn, the adolescent. It seems to ease the spirit and to allow for self-expression of ideas and concerns and

hopes and dreams. Dr. Montessori says that the adolescent should learn to use machines habitually as part of their education and likens such inventions to an adaptable limb of modern man. Then of course she adds that with this use, a new morality, individual and social, must be our prime consideration in this new world of machines. Importantly, Montessori sends the adolescent out to work with their hands in the earth to be taught by nature and to be connected with nature in an intimate manner. Technical instructors, practical life activities, and money-making business endeavors further put the hands of these young people in motion.

True study and thinking require the same association as is required by manual work...work of the hand... It was always realized that anyone who does work that is too hard must join together with others. The first reform in education must be to offer a wider environment and to multiply the possibilities of working in association and of activity...the inert child who has never worked with his hands, who has never had the feeling of being useful and capable of effort, who never found by experience that to live means living socially, and that to think and to create, means to make a harmony of souls; he will become a self-ish youth. He will be pessimistic and melancholy and will seek on the surface of vanity the compensation for a lost paradise. (From Childhood to Adolescence 130)

These are pretty strong words about the necessity of work and the respect for the hands and head and heart which responds. So, in the method of education proposed by Dr. Montessori, the hand occupies a rightful place: in the home, in the infant and toddler community, in the Children's House, and throughout the elementary and secondary school prepared environments. The hand serves the child during the long struggle for ever-widening conquests of ever fuller independence, until an adult emerges, strong, healthy, and really independent so they can contribute to the construction of a better and more humane society. By reinstating the hand in education, Montessori intelligently and scientifically pointed to the natural laws of development as the guiding factor in educational reform and thus progress in our world.

THE CONSTRUCTIVE STAGES OF HUMAN DEVELOPMENT AND THE WORK OF THE HAND: THE BIG PICTURE

We know that becoming a human being is a process, not an event. It is both simple and complex; the paradox persists. The art of observation remains important as we guide our young people along for we know that these stages do not present neat little packages with a prescription to follow. However, we know that within each and every active time period or cycle there are specific tasks related to self-construction that the child or adolescent will undertake as she forms her unique being. Montessori gifted us with a helpful graphic, not entirely her own idea but done in collaboration with other anthropologists and psychologists as a guide. The constructive stages of growth have become a hallmark of Montessori practice and an aid in understanding developmental stages. Camillo Grazzini, the respected AMI trainer from Bergamo, wrote a lengthy article citing the many layers of understanding relative to learning from this visual representation. What we know in a very basic manner is that within each constructive stage there are natural tasks related to learning and to the construction of the personality. These tasks are connected with the hand and the intellect in vital conversation with each other. Each phase of human development prepares and beckons the human towards the following plane. Montessori referred to the unique characteristics of the first, second, third, and fourth planes and informed us of sensitivities and sensitive periods that are woven within the process of becoming. She advised of times when the human being was most open and eager to engage in aspects of learning and living that would suit and satisfy his intelligence and that at each stage activity and movement and the use of the hand was vital. She herself contends that "successive levels of education must correspond to the successive personalities of the child who grows until he becomes a man" (From Childhood to Adolescence 3). Each stage presents characteristics different than those he exhibited during the preceding years. Yet there are connections, a beautiful weaving together of experiences, activities, social relations; the unfolding of a centered life is built through hand and brain connections. We must be able to see our work as having a bearing on what has been, as well as what awaits at the next stage of growth. As advocates for the natural self-construction process, we must be

mindful of the path toward wholeness and see our hands and their hands as part of that process.

The work of the hand in the Children's House, enabled by the precise materials connected with the practical life, sensorial, math, and language are internalized in the building up of the personality and intellect. The hand is the vital instrument in this regard, part of the self-construction process. The grand awareness of Cosmic Education and cosmic tasks are learned through the work of the intellect in harmony with the work of the hand at the second plane. Think of the Hand Timeline in all of its simplicity and deep mystery. The Story of Communication, the Story of Numbers and all of the Great Stories come to life as the child comes to recognize not only the power of the hands of those who lived in the past but also the power of his own hand to respond to those creations with a new energy.

The third constructive stage of adolescence builds upon those experiences and begins to relate them to personal mission and to personal duty and as always to the development of the personality as the stirrings of adulthood begin to be felt. The third plane is a time of recapitulation, the actualizing of everything that has come before. The young adolescent uses her hands in adult-like communal work, meaningful and necessary work on the land and in the nearby village. She enters this phase of growth as a social newborn, becoming a part of a new generation of humans who will live in a society constructed by the work of human hands and dependent upon those hands for their survival. Again, the prepared environments change from the infant/toddler to Children's House to those active workshops of the elementary to the adolescent community. The latter reflects the important experience of many hands working together in communal living on the land and in meaningful occupations in science, active engagement in the humanities, and practical applications of mathematics. All these activities establish readiness for life as adult members of our species in a society where work and collaborative service and a centered life are so important. Yes, I will make the point again that so much of what has transpired before, conscious or unconscious, is brought to life by the work of human hands.

In responding to the stages of development, the human tendencies come to the forefront once again. One really finds an awareness

of these inner drives, those strong drives within the human that urge her toward survival of the species and the development of her full potential that most helpful as we examine the work of the hand and the prepared environments we create for our children and adolescents. The human tendencies are constants across the planes of development. Their needs are responded to in appropriate ways at each stage but they are there, often crying out for satisfaction. Here is where we see the work of the hand both implicitly and explicitly involved in self-construction. We must honor the tendencies, drives, and energies that are present in us and in the children and adolescents we guide into wholeness. Here they are once again, at least a few of them: exploration, orientation, adaptation, manipulation, order, exactness, belonging, activity, work, and imagination. As you go into your workshops this afternoon, I invite you to lift out any one of these innate urges, gifts to the human mind and body, and recognize their connections with the work of the hand. They nourish the mind, body, and soul of each individual. If their presence is ignored, we see the frustration and even stunted growth of the organism. I dare say that the unique scientific materials found in our prepared environments, those related to practical life, to sensorial, to Cosmic Education, to science and mathematics, to those realities found in the prepared environments inside and outside, all enable a response to these tendencies in creative and discreet ways. The hand is involved on every level of encounter as these drives are satisfied and the concepts are internalized. Our prepared environments are built upon the premise that the hand and the intellect are connected and vitalized by each other, that they speak to each other, and that activity, movement, work, orientation, and manipulation have critical roles to play in a Montessori education and in the formation of the centered personality.

So, as you gather this morning and this afternoon as colleagues dedicated to different stages of human becoming, I would like to pose some questions for you to consider:

- How are the prepared environments, both inside and outside, encouraging work with the hand?
- What does your prepared environment look like in terms of beauty and order and cleanliness?

- How do you, at your level, respect the child's and adolescent's need for movement and activity and handwork?
- Are you mindful of the human tendencies as powerful urgings at work in every human being?
- Is the atmosphere and aura of your classroom/environment one that respects and protects the culture of work?
- How do you pursue that adage: Give to the brain only what you have first given to the hand?
- What do your three-period lessons look like? Are you honoring the human being's need to manipulate, to move, to concentrate, to adapt, to internalize concepts through the materials and the environment?
- Where does the use of technology fit into hand work? How do we do that balance? When do we acknowledge that the time is right for the use of this tool?

THE ROLE OF THE ADULT AS PROTECTOR AND GUIDE

Now finally we will touch upon something that has become very important to me as I work with young teachers: the role of the adult. The adult hand that nurtures, respects, blesses, and responds to the natural urgings of the developing human is so very important. The hand of the Montessori parent, the Montessori directress/director, the office manager, the head of school, the volunteer is to be considered. Who do we need to be to our children and our adolescents?

Dr. Silvana Montanero MD, in her book on *Understanding the Human Being* makes such a stunning statement, and it is one I personally have never forgotten:

Education is a relationship between humans. Relationships with children [adolescents] give us a special opportunity to improve ourselves, to acquire a larger awareness of reality. In this way, our limits are stretched, as is our ability to participate in life....the child [adolescent], with

its immense physical and intellectual development, is a miracle standing in front of us. (ix)

We are invited to grow. There must be that awareness of humble service. We must possess a frame of being that is able to see so much more than is evident. Dr. Montessori invited us to be humble, so that we could indeed see the more. We must absent ourselves from what she names as judgments about the child, the adolescent, those stemming from pride and power. We must serve the developing human with all-out generosity, being true to the philosophical and pedagogical knowledge about the human that so effectively guides our practice.

The adolescents, when asked what they value in the teachers and adults who work with them, give us a shaking message. They expect us to work hard, to act morally, to be well-prepared, to listen and to process thoughtfully, and to do what is right when it is hard to do right. In *From Childhood to Adolescence*, Dr. Montessori invites the adult into a whole new way of being present to the adolescent and to the child.

The teachers must have the greatest respect for the young personality, realizing that in the soul of the adolescent, great values are hidden, and that in the minds of these boys and girls there lies all of our hope for future progress and the judgment of ourselves and our times. The intimate vocation of man[kind] is the secret of the adolescent. (112)

And so I leave you with Dr. Montessori's words but also with the thoughts of a very inspiring historic figure, Dag Hammarsjold, the first secretary general of the United Nations. He was a statesman who was dedicated, as was Dr. Montessori, to human understanding and to service. It is from a lovely text called *Markings*. It is an invitation to reflect upon our work as a vocation, of our hands as instruments of generosity and of peace. It reminds us of our own "Yes to life" as we pour out our energies in meaningful and generous ways through the work of our hands.

I don't know Who, or What, put the question, I don't know when it was put. I don't even remember answering. But at some moment I did answer Yes to Someone, or Something, and from that hour I was certain that existence is

meaningful and that, therefore, my life, in self-surrender, had a goal. (205)

Our work with the hands and minds of children and adolescents is a mystery and a sacred task and we have indeed said Yes to the great privilege of serving life. I wish you a lovely afternoon of handwork, ongoing discussion, and a bright, new awareness of the personal gift of your remarkable hands that serve the needs of others.

REFERENCES

- Bosi, Alfredo. "The Works of the Hand." Wisdom of the Hands. December 5, 2012 http://wisdomofhands.blogspot. com/2012/12/alfredo-bosi-work-of-hands.html>
- Grazzini, Camillo. "The Four Planes of Development." The NAMTA Journal 29.1, 2004.
- Greenfield, Susan. The Human Brain: A Guided Tour. New York: Basic Books, 1997.
- Hammarskjold, Dag. Markings. New York: Alfred A. Knopf, 1965.
- Joosten, Albert. "The Hand in Education." The NAMTA Journal 16.1, 1990.
- Montanaro, Silvana Quattrocchi. Understanding the Human Being. Mountain View, CA: Nienhuis Montessori USA, 1991.
- Montessori, Maria. The Absorbent Mind. 1949. Madrid: Kalakshetra, 1984.
- Montessori, Maria. Education for a New World. 1946. Kalakshetra Madrid, 1974.
- Montessori, Maria. Education and Peace. 1949. Chicago: Henry Regnery, 1972.
- Montessori, Maria. From Childhood to Adolescence. 1948. Trans. A.M. Joosten. Rev.ed. New York: Schocken, 1976.
- Montessori, Mario M. The Human Tendencies and Montessori Education. Amsterdam: AMI, 1956.

Napier, John. *Hands*. 1980. New Jersey: Princeton University Press, 1993.

Wilson, Frank. *The Hand*. New York: Random House, 1999.

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